

## REMARKS

### 1. Preliminary Remarks

#### a. Status of the Claims

Claims 1-3, 5-11, 14-18, and 23-25 are pending in this application. Claims 1-3, 5, 9-11, 15, 17, and 24 are amended; and claims 35-38 are new. Applicant respectfully requests that the amendments and remarks made herein be entered into the file history of this application. Upon entry of the amendments, claims 1-3, 5-11, 14-18, 23-25, and 35-38 will be pending and under active consideration.

#### b. Amendments to the Claims

Support for amendments to claim 1 and for the subject matter of claims 35-38 can be found in paragraphs [0078] to [0089] of the specification as originally filed.

### 2. Patentability Remarks

#### a. 35 U.S.C. § 103(a)

On pages 2-4 of the Office Action, the Examiner rejects claims 1-3, 5-11, 14-18, and 23-25 under 35 U.S.C. § 103(a) for allegedly being unpatentable over US 6,206,932 ("Johnson" hereafter). The Examiner asserts that based on the disclosures of Johnson, it would have been obvious to arrive at the instantly claimed prosthesis design variation. Applicant respectfully disagrees.

Amended claim 1 relates to a prosthesis with three main segments--namely a knee member, a trans-tibial member and a linear actuator. The amendment to claim 1 more clearly defines these three elements as well as their functional interrelationships. The prosthesis of amended claim 1 has only one pivot axis between the knee member and the trans-tibial member (the first pivot axis), only one pivot axis between the linear actuator and the trans-tibial member (the second pivot axis) and only one pivot axis between the linear actuator and the knee member (the third pivot axis). Additionally, the first pivot axis and the third pivot axis are spaced apart. The instantly claimed prosthesis therefore has a three-pivot structure.

In essence, the three-segments of the claimed prosthesis define a somewhat triangular structure having a top segment that is the knee segment, and two other leg segments that are posterior and anterior relative to the knee segment. These two other leg segments extend from the knee segment and are pivotally connected to it, meeting at a pivot that defines the single pivot axis about which relative rotation occurs. Given this structure, the length of one of the leg segments (the

linear actuator) must be dynamically adjustable and shorten significantly compared to the other leg segment (the trans-tibial member) during locomotion.

In contrast, the prosthesis disclosed by Johnson requires more than three pivots, and thus more segments than the instantly claimed prosthesis. For example, there are an additional two pivots between the elongated structure and the knee member (namely elements 35 and 54) to provide the relative rotation between these two segments. Johnson at Figure 2. Furthermore, there are two pivots between the linear actuator and the elongated structure (namely elements 94 and 58) as well as an extra segment (element 92) to provide the relative rotation between the linear actuator and the elongated structure. *Id.* at Figure 5. Johnson does not teach or suggest a prosthesis that has only a three-pivot structure. Thus, Johnson does not provide any means or understanding for one of skill to arrive at the instantly claimed prosthesis, which is a more simplified, efficient and stable structure.

Additionally, the prosthesis of Johnson is aimed at providing a prosthesis with “a readily adjustable heel-to-toe configuration without disturbing any other fixed adjustments on the prosthetic limb, and without requiring adjustment tools.” *Id.* at col. 2, lines 63-67. Johnson accomplishes this by providing that “[t]he prosthetic limb is angularly aligned in the anterior-posterior plane upon extension and retraction of the positioning mechanism.” *Id.* at col. 2, lines 50-52 (emphasis added). In contrast, the instantly claimed prosthesis is intended to improve energy transfer between the amputee and the prosthesis. *See* Instant Application at p. 2, lines 2-5, 14, and 15. Accordingly, for the instantly claimed prosthesis, “movement between the knee member (12) and the trans-tibial member (14) is not purely rotational but follows a much more complex pattern. The right and left sides of the parts can further be slightly different, thereby causing a slight torsion movement around a vertical axis.” *Id.* at lines 9-17 (emphasis added). Thus, while the Johnson prosthesis is limited to only angular rotation around its pivots (*i.e.*, anterior-posterior axis) given its rectangular configuration around a four-pivot axis (*see, e.g.*, Johnson at Figure 1, “A axis”), the instantly claimed prosthesis provides a greater range of motion because it can undergo torsion around a vertical axis. Johnson provides no teaching or motivation, much less an expectation of success for one of ordinary skill in the art to arrive at the three-pivot axis structure of the instantly claimed prosthesis. In view of the foregoing, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 1-3, 5-11, 14-18, and 23-25 under 35 U.S.C. § 103(a).

### 3. Conclusion

Applicant respectfully submits that the instant application is in good and proper order for allowance and early notification to this effect is solicited. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the instant application, the Examiner is encouraged to call the undersigned at the number listed below.

Respectfully submitted,

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